

## How to Effectively Kill Russian Olive

The following document is a guide to effectively killing Russian olive on your property. There are several other methods outlined in our “Techniques for removing or controlling Russian olive” document. Over the last 15 years Rim to Rim has tried many methods to remove Russian olive – from whole tree extraction and mowing without herbicide use, to combinations of mowing and cut stump treatments using herbicide. The practice outlined here, the cut stump method, is a commonly used and very effective method to kill these trees while using a minimal amount of carefully applied herbicide. This practice can also be used to treat other invasive trees such as tamarisk, tree of heaven, Siberian elm, and tamarisk.

### Identification:

It is important to make sure you are correctly identifying your target species. Tamarisk trees are distinct, but Russian olives when young can be mistaken for silver leaf buffalo berry, Elm can be mistaken for netleaf or common hackberry, and tree of heaven can be mistaken for several sumac species. Be sure to know what the distinguishing characteristics of your target species are before you begin work.

#### Minimum Required PPE

- Safety Glasses that wrap around your eyes
- Chemical resistant gloves such as nitrile gloves
- Shoes plus socks
- Long sleeve shirt and long pants

### Personal Protective Equipment (PPE)

Before you get started you should make sure that you have the appropriate personal protective equipment (PPE) available for the type of herbicide you are applying. **(You should also make sure you have proper PPE for chainsawing if you choose to use a chainsaw. This**

**document does not cover chainsaw safety.)** Read your herbicide label to find out the minimum PPE required. Different herbicides require different PPE and you can always wear more than is required. **As an herbicide applicator you are required to read the herbicide label of the particular chemical that you are applying and follow all guidelines. This document does not substitute for reading and understanding your chemical label.**

### Herbicide Information

Typically, herbicide concentrates are mixed with additives called adjuvants to improve the application of the herbicide to the plant material. The resulting solution of herbicide and adjuvant is called a mix or herbicide mix. Glyphosate based mixes are commonly used for tamarisk and Russian olive treatments. Glyphosate concentrates can be bought at any hardware store. These chemicals are sold under a few different trade names. Commonly available glyphosate trade names include Rodeo, Ranger Pro, and AquaNeat.

It is helpful to add a dye to your herbicide mix such as Mark it Blue at a 0.5% dye per herbicide solution rate to indicate where herbicide has been applied. This will make your application easy to see, which will make it more effective and prevent over application of herbicide. For more information on herbicide mixes refer to resources 2 and 3 at the end of the document.

### Safety and Risk Prevention:

**It is important to note if you are going to apply herbicide close to any exposed water.** Whether it’s moving or standing water you are required to use a water safe herbicide (such as AquaNeat) to prevent unintended damage to aquatic ecosystems, including fishes, invertebrates or aquatic plants.



Russian olive resprout from untreated cut surface.

#### Glyphosate for Cut stump Treatments of Russian Olive

Apply herbicide within 15 minutes of cutting the low stump (sooner if possible). Delay in applying this product may reduce performance. For best results, trees should be cut during periods of active growth and full leaf expansion.

**Tips: This treatment is great when hot, and in times of less draw down you can use 100% active chemical, with a syringe or wash bottle to minimize overspray.**

**DO NOT SPRAY WHEN IT IS WINDY.** Wind will carry herbicide to non-target plants and can contaminate you.

If you are not a Utah certified pesticide applicator you should work closely with a licensed and trained applicator while you are doing Russian olive or tamarisk removal work. Working with a certified applicator, even if your herbicide doesn't require you to be certified, can help you minimize your exposure and make your applications more effective.

### Cut Stump Technique

One of the most effective ways to kill tamarisk or Russian olive on your property is to first cut and remove standing trees. Then treat the cut surface and bark with an herbicide. You can remove biomass to the dump, chip it and spread it for weed control, or burn it. Effective cut stump treatments use the following steps:

1. Cut the trunk of the tree as low as you can.
2. Keep the cut surface clean of dirt and debris (If it gets dirty you can cut it again)
3. Make sure the cut surface is flat and level to prevent herbicide runoff when applying
4. **Apply herbicide within 5 minutes of your final cut**, if possible, and no longer than 15 minutes after cutting.

### Herbicide Application

For the most effective application the herbicide should only be applied to the "sapwood" (the growing layer of the tree which on large trees is found in the outer most ring) and to the bark below the cut area. The sapwood is usually only an inch thick or less of lighter colored wood on the outer edge of the cut surface. Again, it is important to apply herbicide within 15 minutes of cutting the stump. There is no point to applying herbicide if you cannot apply it in this short window.

There are a number of different tools you can use to apply herbicide to this layer but most commonly you can use a clean quart spray bottle or a paint brush. Spray bottles tend to break sooner so just be prepared and have backups. Herbicide should be applied so that all of the sapwood and bark is covered and none of it is running off or puddling. One of the best and most accurate applicators is a Nalgene wash bottle pictured below.



#### Sources/Resources:

<sup>1</sup>National Pesticide Information Center is a great resource for all concerns and questions about herbicide use:

<http://npic.orst.edu/>

<sup>2</sup>Utah State University Extension has a good resource on Russian olive cut stump herbicide options:

Russian Olive Control – Cut Stump Treatments, Utah State University Extension, Patterson and Worwood, January 2014

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<sup>3</sup>Techline News has a good article on using different triclopyr mixes on both tamarisk and Russian olive

[https://riversedgewest.org/sites/default/files/resource-center-documents/Garlon3A\\_4FAQ.pdf](https://riversedgewest.org/sites/default/files/resource-center-documents/Garlon3A_4FAQ.pdf)

<sup>4</sup>Rivers Edge West has many resources on various woody invasive species removal:

<https://riversedgewest.org/resource-center/woody-invasives>

### TIPS AND SUGGESTIONS

- The best time to apply herbicide is in the summer or fall. Treatment at other times does work but may require more follow up.
- If you are clearing a large area of tamarisk or Russian olive you can cut all of the stumps high (2-3' tall) then come through later and cut them low so that you can apply all herbicide at one time.



Herbicide treatment of Russian olive. Note the herbicide is only applied to the outer sapwood.